

What is claimed is:

1. A semiconductor mechanical quantity sensor comprising:

a plurality of mono-axial sensors arranged in the same direction for detecting a mono-axial mechanical quantity based on capacities among fixed electrodes and moving electrodes coupled to beams that are capable of undergoing displacement depending upon the acceleration.

2. A semiconductor mechanical quantity sensor according to claim 1, wherein said plurality of mono-axial sensors are formed on different semiconductor substrates.

3. A semiconductor mechanical quantity sensor according to claim 1, wherein said plurality of mono-axial sensors are formed on a common semiconductor substrate.

4. A semiconductor mechanical quantity sensor according to claim 1, wherein said plurality of mono-axial sensors are formed to be stacked on a common semiconductor substrate or on a mother substrate.

5. A semiconductor mechanical quantity sensor according to claim 1, wherein said plurality of mono-axial sensors are formed on both surfaces of a common semiconductor substrate or of a mother substrate.

6. A semiconductor acceleration sensor for producing an output signal while maintaining a necessary sensitivity, comprising:

a semiconductor substrate; and

a plurality of sensor elements, each having fixed electrodes secured to said semiconductor substrate and moving electrodes coupled to beams, wherein the moving electrodes are capable of being displaced depending upon the acceleration, to detect acceleration based on capacities among said fixed electrodes and said moving electrodes;

wherein said sensor elements are provided in a predetermined number, each of said sensor elements has a sensitivity equal to said necessary sensitivity divided by said predetermined number, and the acceleration signals output from said sensor elements are summed to obtain an output signal maintaining said necessary sensitivity.